



**BURLINGTON
ENVIRONMENTAL**

RECEIVED
MAY 11 1993

RCRA PERMITS SECTION

WAD 2917
F14f
5/11/1993

FILE COPY

May 7, 1993

CERTIFIED MAIL

Ms. Carrie Sikorski
EPA Project Coordinator
U.S. EPA
1200 Sixth Avenue, M/S HW-106
Seattle, WA 98101

RCRA PERMIT
ADDITIONAL PERMIT
TOTAL NUMBER OF PERMITS

Ms. Sikorski:

Attached is the Bimonthly Progress Report required by the 3008(h) Order for RFI activities completed at the Burlington Environmental Inc. Pier 91 Facility for the months of March and April 1993.

If you have any questions or require further information, please contact me at (206) 654-8153.

Sincerely,

John Stiller
Project Coordinator

cc: Barb Smith, Ecology NWRO

USEPA RCRA




3012353

PROJECT MEMORANDUM

DATE: May 7, 1993

TO: John Stiller

CC: Gary Podrabsky
Nate Mathews
Dave Haddock

FROM: Joe Depner 

PROJECT: 624878
Burlington Environmental Inc. Pier 91 RFI

SUBJECT: RFI PROGRESS REPORT, PIER 91 FACILITY (MARCH TO APRIL, 1993)

This memorandum summarizes the progress of the Burlington Environmental Inc. (Burlington) Technical Services Division on the Pier 91 RCRA facility investigation (RFI), from March 1 to April 30, 1993. This is the fifth bimonthly progress report for the Pier 91 RFI. The 3008(h) order for the facility requires that progress reports be submitted bimonthly until the order is terminated.

DESCRIPTION AND ESTIMATE OF WORK COMPLETED

The following work was completed during the reporting period:

- Installation of monitoring wells CP-106B, CP-115B, and CP-122B was completed and the wells were developed.
- The field portion of the first tidal monitoring session was completed March 5-8, 1993.
- Rising-head slug tests were performed in well CP-105B, and in all of the new wells.
- The first round of groundwater sampling was completed April 5-14, 1993.
- After receiving USEPA comments on the February 1993 draft of the Pumping Test Work Plan, the work plan was revised and resubmitted (April 1993).

Page 2

Memorandum from Joe Depner

Subject: Pier 91 RFI Progress Report (March - April 1993)

May 7, 1993

- An application for a temporary water-use permit was submitted to the Washington Department of Ecology, in preparation of the pumping test.

Other important developments that occurred during the reporting period include:

- Burlington received written USEPA approval of the February 1993 version of the Tidal Monitoring Work Plan.
- Burlington was informed of the existence of a deep water-supply well north of the City Ice building (Cold Storage Warehouse W-39). Burlington acquired a driller's log, results of a pumping test, and other miscellaneous information on the well.
- Burlington began preparation of a request for variance from the RFI Work Plan, involving the use of Port of Seattle monitoring well W-10. The request is expected to be ready for submittal to USEPA sometime during the first half of May 1993.
- Burlington began preparation of a request for variance from the RFI Work Plan, for revising the RFI schedule. The request is expected to be ready for submittal to USEPA sometime during the first half of May 1993.
- Requests for variance from the RFI Work Plan were prepared, on the following issues:
 - Sampling from Port of Seattle monitoring well MW-39-3 in lieu of installing proposed monitoring well CP-120;
 - Modifying the design and installation procedure for well CP-122A.

SUMMARY OF ALL FINDINGS

Preliminary hydraulic conductivity estimates from slug tests performed in the shallow aquifer monitoring wells vary approximately from 3×10^{-3} to 1×10^{-2} centimeters per second (cm/s), while those for the deep aquifer vary approximately from 3×10^{-5} to 2×10^{-3} cm/s.

Page 3

Memorandum from Joe Depner

Subject: Pier 91 RFI Progress Report (March - April 1993)

May 7, 1993

Analysis of the tidal monitoring data has not been completed, for two reasons. First, Burlington has not yet received the requested tide-level data for the month of March from the National Ocean Service. Second, the new monitoring wells, including the deep-aquifer wells CP-106B, CP-115B and CP-122B, have not yet been surveyed. Well surveying is necessary because the water-level data from the tidal monitoring need to be corrected to a common vertical datum in order to compile accurate maps of the deep aquifer's potentiometric surface and to obtain reliable estimates of hydraulic gradients. Burlington is planning to complete maintenance activities on some of the monitoring wells at the facility, and intends to survey the wells after the maintenance is complete, in late May 1993.

SUMMARY OF ALL PROBLEMS ENCOUNTERED

Burlington personnel have observed pressure buildup in the casings of new monitoring wells CP-106B, CP-115B and CP-122B. To our knowledge, this problem has not occurred previously at the site. The pressure buildup is apparently due to the accumulation of gases in the wellbores. This may be the result of decaying natural organic matter in the sediments surrounding the well, since no oily contamination was observed in the drill cuttings from the screened zones of these wells. Burlington is currently investigating the feasibility of replacing the slip caps on these wells with special expanding caps that have hand-operated valves. Presumably these special caps would allow the wells to be safely vented at a controlled rate prior to measuring water levels or collecting groundwater samples. The valves could be closed after the work was completed, to minimize the danger of introducing surface water or other substances into the wellbore.

During the initial attempt to purge monitoring well CP-116, for groundwater sampling, the well was observed to produce turbid water. The well was then redeveloped and allowed to remain undisturbed for 24 hours before it was purged and sampled. The purging process produced water of acceptable quality for sampling.

Port of Seattle monitoring well W-10 was observed to show signs of possible damage to the well and surface seal. Details can be found in the May 1993 variance request that Burlington intends to submit to the USEPA.

Page 4

Memorandum from Joe Depner

Subject: Pier 91 RFI Progress Report (March - April 1993)

May 7, 1993

PROJECTED WORK FOR THE NEXT REPORTING PERIOD

The following activities are projected for the next reporting period, which is from May 1 to June 30, 1993:

- Monthly water-level measurements from the monitoring wells will be collected.
- Following Burlington's completion of well maintenance work at the Pier 91 facility, the new wells and hand auger boreholes will be surveyed.
- Following completion of the surveying, and receipt of the surveyed well elevations and tide-level data by Burlington, the data from the first tidal monitoring session will be analyzed.
- If the USEPA approves the revised Pumping Test Work Plan, Burlington will begin to make preparations for conducting the pumping test.
- If the USEPA approves the relevant variance request in addition to approving the revised Pumping Test Work Plan, temporary shallow piezometer CP-122A will be installed and developed prior to the start of the pumping test.
- Soil sample chemical analysis results will be entered into Burlington's electronic data management system.
- Groundwater sample chemical analysis results from the first sampling round will undergo QA/QC data validation review as they become available, and will then be entered into Burlington's electronic data management system.

Please contact me if you have any questions regarding the above.

JD/b47:2274b.mem